WHAT IS CLAIMED IS:

1. A color active matrix type vertically aligned mode liquid crystal display comprising on a substrate:

a scan signal wiring;

a video signal wiring;

a thin film transistor which is formed at an intersection of the scan signal wiring and the video signal wiring;

a transparent pixel electrode connected to the thin film transistor element in which two or more long and slender slits are formed;

an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of the slits of the transparent pixel electrode currently formed via an insulator film;

a color filter substrate facing the active matrix substrate; and

an anisotropic liquid crystal layer having a negative dielectric constant sandwiched by the active matrix substrate and the color filter substrate;

wherein in order to impress a voltage to liquid crystal molecules vertically aligned between the active matrix substrate and the color filter substrate, and to make the liquid crystal molecules tilt in different two directions or four directions, two kinds of following electrode structures are formed in one pixel of the active matrix substrate:

(i) an electrode structure in which a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrodes facing the transparent flat common electrode in the active matrix substrate side, patterns (no transparent electrode in a slit part) having a shape of a long and slender slit are formed;

(ii) an electrode structure in which a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrode facing the

transparent flat common electrode in the active matrix substrate side, patterns having a shape of a long and slender slit are formed, and a liquid crystal alignment direction control electrode having almost the same shape as a shape of the slits and a larger dimension than a dimension of the slits is formed in a lower layer of the slits via the insulator film.

2. A method for driving a color active matrix type vertically aligned mode liquid crystal display having a transparent pixel electrode in which two or more long and slender slits are formed, an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of the slits of the transparent pixel electrode currently formed via an insulator film, a color filter substrate facing the active matrix substrate, and

an electrode structure for each pixel of the active matrix substrate in which (i) a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrodes facing the transparent flat common electrode in the active matrix substrate side, patterns (no transparent electrode in a slit part) having a shape of a long and slender slit are formed, and (ii) a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrode facing the transparent flat common electrode in the active matrix substrate side, patterns having a shape of a long and slender slit are formed, and a liquid crystal alignment direction control electrode having almost the same shape as a shape of the slits and a larger dimension than a dimension of the slits is formed in a lower layer of the slits via the insulator film; said driving method comprising the following steps of:

setting a potential of the liquid crystal alignment direction control electrode currently placed in a lower layer of the slit of the transparent pixel electrode lower

than a potential of the transparent pixel electrode when a potential of the transparent pixel electrode separated for every pixel on the active matrix substrate side is lower than a potential of the facing flat common electrode on the color filter substrate side;

setting a potential of the liquid crystal alignment direction control electrode placed in a lower layer of the slit of the transparent pixel electrode higher than a potential of the transparent pixel electrode when a potential of the transparent pixel electrode is higher than a potential of the facing flat common electrode of the color filter substrate side; and

reversing polarities of the potential of the transparent pixel electrode, and the potential of the liquid crystal alignment direction control electrode to a polarity of a potential of the flat common electrode in the color filter substrate side every vertical scanning period.

3. The color active matrix type vertically aligned mode liquid crystal display according to Claim 1,

wherein when a potential of the transparent pixel electrode separated for every pixel of the active matrix substrate side is lower than a potential of the facing flat common electrode on the color filter substrate side, a potential of the liquid crystal alignment direction control electrode currently placed in a lower layer of the slit of the transparent pixel electrode is set lower than a potential of the transparent pixel electrode;

when a potential of the transparent pixel electrode is higher than a potential of the facing flat common electrode of the color filter substrate side, a potential of the liquid crystal alignment direction control electrode placed in a lower layer of the slit of the transparent pixel electrode is set higher than a potential of the transparent pixel electrode; and

polarities of the potential of the transparent pixel electrode, and the potential of the liquid crystal alignment direction control electrode are reversed to a polarity of the potential of the flat common electrode in the color filter substrate side every vertical scanning period.

4. A color active matrix type vertically aligned mode liquid crystal display comprising on a substrate:

a scan signal wiring;

a video signal wiring;

a thin film transistor which is formed at an intersection of the scan signal wiring and the video signal wiring;

a transparent pixel electrode connected to the thin film transistor element in which two or more long and slender slits are formed;

an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of slits of the transparent pixel electrode currently formed via an insulator film;

a color filter substrate facing the active matrix substrate; and

an anisotropic liquid crystal layer having a negative dielectric constant sandwiched by the active matrix substrate and the color filter substrate;

wherein in order to impress a voltage to liquid crystal molecules vertically aligned between the active matrix substrate and the color filter substrate, and to make the liquid crystal molecules tilt in different two directions or four directions, two kinds of following electrode structures are formed in one pixel of the active matrix substrate:

(i) an electrode structure in which a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrodes facing the transparent flat common electrode in the active matrix

substrate side, patterns (no transparent electrode in a slit part) having a shape of a long and slender slit are formed; (ii) an electrode structure in which a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrode facing the transparent flat common electrode in the active matrix substrate side, patterns having a shape of a long and slender slit are formed, and two rows of liquid crystal alignment direction control electrodes that are mutually separated and set as potentials different from each other exist in a lower layer of the transparent pixel electrode via the insulated film, either of the liquid crystal alignment direction control electrodes has almost the same shape as a shape of a pattern of the shape of long and slender slits, and a larger dimension than a dimension of the slits, and two rows of the liquid crystal alignment direction control electrodes mutually separated are arranged in a direction of a scan signal wiring in a lower layer of the long and slender slits that are formed, mutually exchanged in an every fixed pixel cycle, in the transparent pixel electrode.

5. A method for driving a color active matrix type vertically aligned mode liquid crystal display having a transparent pixel electrode in which two or more long and slender slits are formed, an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of the slits of the transparent pixel electrode currently formed via an insulator film, a color filter substrate facing the active matrix substrate, and

an electrode structure for each pixel of the active matrix substrate in which (i) a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrodes facing the transparent flat common electrode in the active matrix substrate side, patterns (no transparent electrode in a slit part) having a

shape of a long and slender slit are formed, and (ii) a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrode facing the transparent flat common electrode in the active matrix substrate side, patterns having a shape of a long and slender slit are formed, and two rows of liquid crystal alignment direction control electrodes that are mutually separated and set as potentials different from each other exist in a lower layer of the transparent pixel electrode via the insulated film, either of the liquid crystal alignment direction control electrodes has almost the same shape as a shape of a pattern of the shape of long and slender slits, and a larger dimension than a dimension of the slits, and two rows of the liquid crystal alignment direction control electrodes mutually separated are arranged in a direction of a scan signal wiring in a lower layer of the long and slender slits that are formed, mutually exchanged in an every fixed pixel cycle, in the transparent pixel electrode; said driving method comprising the following steps of:

setting a potential of the liquid crystal alignment direction control electrode currently placed in a lower layer of the slit of the transparent pixel electrode lower than a potential of the transparent pixel electrode when a potential of the transparent pixel electrode separated for every pixel of the active matrix substrate side is lower than a potential of the facing flat common electrode on the color filter substrate side;

setting a potential of the liquid crystal alignment direction control electrode placed in a lower layer of the slit of the transparent pixel electrode higher than a potential of the transparent pixel electrode when a potential of the transparent pixel electrode is higher than a potential of the facing flat common electrode of the color filter substrate side;

setting potentials of the liquid crystal alignment direction control electrodes arranged in the vicinity of both sides of the scan signal wiring as polar potentials different from each other; and

reversing polarities of the potential of the transparent pixel electrode, and each of the potentials of the two rows of the liquid crystal alignment direction control electrodes mutually separated in one pixel to a polarity of a potential of the flat common electrode on the color filter substrate side every vertical scanning period.

6. The color active matrix type vertically aligned mode liquid crystal display according to Claim 4,

wherein when a potential of the transparent pixel electrode separated for every pixel of the active matrix substrate side is lower than a potential of the facing flat common electrode on the color filter substrate side, a potential of the liquid crystal alignment direction control electrode currently placed in a lower layer of the slit of the transparent pixel electrode is set lower than a potential of the transparent pixel electrode;

when a potential of the transparent pixel electrode is higher than a potential of the facing flat common electrode on the color filter substrate side, a potential of the liquid crystal alignment direction control electrode placed in a lower layer of the slit of the transparent pixel electrode is set higher than a potential of the transparent pixel electrode;

potentials of the liquid crystal alignment direction control electrodes arranged in the vicinity of both sides of the scan signal wiring are set as polar potentials different from each other; and

polarities of the potential of the transparent pixel electrode, and each of the potentials of the two rows of the liquid crystal alignment direction control electrodes mutually separated in one pixel are reversed to a polarity

of a potential of the flat common electrode on the color filter substrate side every vertical scanning period.

7. A color active matrix type vertically aligned mode liquid crystal display comprising on a substrate:

a scan signal wiring;

a video signal wiring;

a thin film transistor which is formed at an intersection of the scan signal wiring and the video signal wiring;

a transparent pixel electrode connected to the thin film transistor element in which two or more long and slender slits are formed;

an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of slits of the transparent pixel electrode currently formed via an insulator film;

a color filter substrate facing the active matrix substrate; and

an anisotropic liquid crystal layer having a negative dielectric constant sandwiched by the active matrix substrate and the color filter substrate,

wherein adjacent transparent pixel electrodes in a direction of the scan signal wiring are connected to a thin film transistor component controlled by mutually different scan signal wirings,

further wherein, in order to impress a voltage to liquid crystal molecules vertically aligned between the active matrix substrate and the color filter substrate, and to make the liquid crystal molecules tilt in different two directions or four directions, two kinds of following electrode structures are formed in one pixel of the active matrix substrate:

(i) an electrode structure in which a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrodes facing the

transparent flat common electrode in the active matrix substrate side, patterns (no transparent electrode in a slit part) having a shape of a long and slender slit are formed; (ii) an electrode structure in which a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrode facing the transparent flat common electrode in the active matrix substrate side, patterns having a shape of a long and slender slit are formed, and a liquid crystal alignment direction control electrode having almost the same shape as a shape of the slit, and a larger dimension than a dimension of the slit is formed in a lower layer of the slit via the insulated film.

8. A method for driving a color active matrix type vertically aligned mode liquid crystal display having a transparent pixel electrode in which two or more long and slender slits are formed where adjacent transparent pixel electrodes in a direction of scan signal wiring are connected to a thin film transistor component controlled by mutually different scan signal wirings, an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of the slits of the transparent pixel electrode currently formed via an insulator film, a color filter substrate facing the active matrix substrate, and an electrode structure for each pixel of the active matrix substrate in which (i) a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrodes facing the transparent flat common electrode in the active matrix substrate side, patterns (no transparent electrode in a slit part) having a shape of a long and slender slit are formed, and (ii) a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrode facing the transparent flat common electrode in the active matrix substrate side, patterns having a shape of

a long and slender slit are formed, and a liquid crystal alignment direction control electrode having almost the same shape as a shape of the slit, and a larger dimension than a dimension of the slit is formed in a lower layer of the slit via the insulated film; said driving method comprising the following steps of:

setting a potential of the liquid crystal alignment direction control electrode currently placed in a lower layer of the slit of the transparent pixel electrode lower than a potential of the transparent pixel electrode when a potential of the transparent pixel electrode separated for every pixel on the active matrix substrate side is lower than a potential of the facing flat common electrode on the color filter substrate side;

setting a potential of the liquid crystal alignment direction control electrode placed in a lower layer of the slit of the transparent pixel electrode higher than a potential of the transparent pixel electrode when a potential of the transparent pixel electrode is higher than a potential of the facing flat common electrode of the color filter substrate side; and

reversing polarities of the potential of the transparent pixel electrode, and the potential of the liquid crystal alignment direction control electrode to a polarity of the potential of the flat common electrode in the color filter substrate side every vertical scanning period.

9. The color active matrix type vertically aligned mode liquid crystal display according to Claim 7,

wherein when a potential of the transparent pixel electrode separated for every pixel of the active matrix substrate side is lower than a potential of the facing flat common electrode on the color filter substrate side, a potential of the liquid crystal alignment direction control electrode currently placed in a lower layer of the slit of

the transparent pixel electrode is set lower than a potential of the transparent pixel electrode;

when a potential of the transparent pixel electrode is higher than a potential of the facing flat common electrode of the color filter substrate side, a potential of the liquid crystal alignment direction control electrode placed in a lower layer of the slit of the transparent pixel electrode is set higher than a potential of the transparent pixel electrode; and

polarities of the potential of the transparent pixel electrode, and the potential of the liquid crystal alignment direction control electrode are reversed to a polarity of the potential of the flat common electrode in the color filter substrate side every vertical scanning period.

10. A color active matrix type vertically aligned mode liquid crystal display comprising on a substrate:

a scan signal wiring;

a video signal wiring;

a thin film transistor which is formed at an intersection of the scan signal wiring and the video signal wiring;

a transparent pixel electrode, connected to the thin film transistor element, that has two or more of circular or polygonal holes and two or more long and slender slits currently formed therein;

an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of the slits of the transparent pixel electrode currently formed via an insulator film;

a color filter substrate facing the active matrix substrate; and

an anisotropic liquid crystal layer having a negative dielectric constant sandwiched by the active matrix substrate and the color filter substrate,

wherein, in order to impress a voltage to liquid crystal molecules that are vertically aligned between the active matrix substrate and the color filter substrate and to make the liquid crystal molecules tilt in many directions, two kinds of following electrode structures are formed in one pixel of the active matrix substrate:

(i) an electrode structure in which a transparent flat common electrode is used on the color filter substrate side, and for transparent pixel electrodes facing thereto in the active matrix substrate side, circular or polygonal holes (no transparent electrodes in a portion of a hole) are formed;

(ii) an electrode structure in which a transparent flat common electrode is used in the color filter substrate side, and for transparent pixel electrodes facing the transparent flat common electrode in the active matrix substrate side, patterns having a shape of a long and slender slit are formed, and a liquid crystal alignment direction control electrodes having almost the same shape as a shape of the slit, and a larger dimension than a dimension of the slit is formed in a lower layer of the slit via an insulated film.

11. A method for driving a color active matrix type vertically aligned mode liquid crystal display having a transparent pixel electrode that has two or more of circular or polygonal holes and two or more long and slender slits currently formed therein, an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of the slits of the transparent pixel electrode currently formed via an insulator film, a color filter substrate facing the active matrix substrate, and an electrode structure for each pixel of the active matrix substrate in which (i) a transparent flat common electrode is used on the color filter substrate side, and for transparent pixel electrodes facing thereto in the active matrix substrate side, circular or polygonal holes (no

transparent electrodes in a portion of a hole) are formed, and (ii) a transparent flat common electrode is used in the color filter substrate side, and for transparent pixel electrodes facing the transparent flat common electrode in the active matrix substrate side, patterns having a shape of a long and slender slit are formed, and a liquid crystal alignment direction control electrodes having almost the same shape as a shape of the slit, and a larger dimension than a dimension of the slit is formed in a lower layer of the slit via an insulated film; said driving method comprising the following steps of:

setting a potential of the liquid crystal alignment direction control electrode currently placed in a lower layer of the slit of the transparent pixel electrode lower than a potential of the transparent pixel electrode when a potential of the transparent pixel electrode separated for every pixel of the active matrix substrate side is lower than a potential of the facing flat common electrode on the color filter substrate side;

setting a potential of the liquid crystal alignment direction control electrode placed in a lower layer of the slit of the transparent pixel electrode higher than a potential of the transparent pixel electrode when a potential of the transparent pixel electrode is higher than a potential of the facing flat common electrode of the color filter substrate side; and

reversing polarities of the potential of the transparent pixel electrode, and the potential of the liquid crystal alignment direction control electrode to a polarity of a potential of the flat common electrode in the color filter substrate side every vertical scanning period.

12. The color active matrix type vertically aligned mode liquid crystal display according to Claim 10,

wherein when a potential of the transparent pixel electrode separated for every pixel of the active matrix

substrate side is lower than a potential of the facing flat common electrode on the color filter substrate side, a potential of the liquid crystal alignment direction control electrode currently placed in a lower layer of the slit of the transparent pixel electrode is set lower than a potential of the transparent pixel electrode;

when a potential of the transparent pixel electrode is higher than a potential of the facing flat common electrode of the color filter substrate side, a potential of the liquid crystal alignment direction control electrode placed in a lower layer of the slit of the transparent pixel electrode is set higher than a potential of the transparent pixel electrode; and

polarities of the potential of the transparent pixel electrode, and the potential of the liquid crystal alignment direction control electrode are reversed to a polarity of the potential of the flat common electrode in the color filter substrate side every vertical scanning period.

13. A color active matrix type vertically aligned mode liquid crystal display comprising on a substrate:

a scan signal wiring;

a video signal wiring;

a thin film transistor which is formed at an intersection of the scan signal wiring and the video signal wiring;

a transparent pixel electrode, connected to the thin film transistor element, that has two or more of circular or polygonal holes and two or more long and slender slits currently formed therein;

an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of the slits of the transparent pixel electrode currently formed via an insulator film;

a color filter substrate facing the active matrix substrate; and

an anisotropic liquid crystal layer having negative dielectric constant sandwiched by the active matrix substrate and the color filter substrate,

wherein, in order to impress a voltage to liquid crystal molecules that are vertically aligned between the active matrix substrate and the color filter substrate and to make the liquid crystal molecules tilt in many directions, two kinds of following electrode structures are formed in one pixel of the active matrix substrate:

(i) an electrode structure in which a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrodes facing thereto in the active matrix substrate side, circular or polygonal holes (no transparent electrodes in a portion of a hole) are formed;

(ii) an electrode structure in which a transparent flat common electrode is used on a color filter substrate side, and for transparent pixel electrodes facing thereto in the active matrix substrate side, patterns having a shape of a long and slender slit are formed, and two rows of liquid crystal alignment direction control electrodes that are mutually separated and set as potentials different from each other exist in a lower layer of the transparent pixel electrode via the insulated film, either of the liquid crystal alignment direction control electrodes have almost the same shape as a shape of a pattern of the shape of long and slender slits, and a larger dimension than a dimension of the slit; and

two rows of the liquid crystal alignment direction control electrodes mutually separated are arranged in a direction of a scan signal wiring in a lower layer of the long and slender slits that are formed, mutually exchanged in an every fixed pixel cycle, in the transparent pixel electrode.

14. A method for driving a color active matrix type vertically aligned mode liquid crystal display having a

transparent pixel electrode that has two or more of circular or polygonal holes and two or more long and slender slits currently formed therein, an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of the slits of the transparent pixel electrode currently formed via an insulator film, a color filter substrate facing the active matrix substrate, and an electrode structure for each pixel of the active matrix substrate in which (i) a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrodes facing thereto in the active matrix substrate side, circular or polygonal holes (no transparent electrodes in a portion of a hole) are formed, (ii) a transparent flat common electrode is used on a color filter substrate side, and for transparent pixel electrodes facing thereto in the active matrix substrate side, patterns having a shape of a long and slender slit are formed, and two rows of liquid crystal alignment direction control electrodes that are mutually separated and set as potentials different from each other exist in a lower layer of the transparent pixel electrode via the insulated film, either of the liquid crystal alignment direction control electrodes have almost the same shape as a shape of a pattern of the shape of long and slender slits, and a larger dimension than a dimension of the slit, and two rows of the liquid crystal alignment direction control electrodes mutually separated are arranged in a direction of a scan signal wiring in a lower layer of the long and slender slits that are formed, mutually exchanged in an every fixed pixel cycle, in the transparent pixel electrode; said driving method comprising the following steps of:

setting a potential of the liquid crystal alignment direction control electrode currently placed in a lower layer of the slit of the transparent pixel electrode lower than a potential of the transparent pixel electrode when a

potential of the transparent pixel electrode separated for every pixel of the active matrix substrate side is lower than a potential of the facing flat common electrode on the color filter substrate side;

setting a potential of the liquid crystal alignment direction control electrode placed in a lower layer of the slit of the transparent pixel electrode higher than a potential of the transparent pixel electrode when a potential of the transparent pixel electrode is higher than a potential of the facing flat common electrode on the color filter substrate side;

setting potentials of the liquid crystal alignment direction control electrodes arranged in the vicinity of both sides of the scan signal wiring as polar potentials different from each other; and

reversing polarities of the potential of the transparent pixel electrode, and each of the potential of the two rows of the liquid crystal alignment direction control electrodes mutually separated in one pixel to a polarity of a potential of the flat common electrode in the color filter substrate side every vertical scanning period.

15. The color active matrix type vertically aligned mode liquid crystal display according to Claim 13,

wherein when a potential of the transparent pixel electrode separated for every pixel of the active matrix substrate side is lower than a potential of the facing flat common electrode on the color filter substrate side, a potential of the liquid crystal alignment direction control electrode currently placed in a lower layer of the slit of the transparent pixel electrode is set lower than a potential of the transparent pixel electrode;

when a potential of the transparent pixel electrode is higher than a potential of the facing flat common electrode of the color filter substrate side, a potential of the liquid crystal alignment direction control electrode placed

in a lower layer of the slit of the transparent pixel electrode is set higher than a potential of the transparent pixel electrode; and

potentials of the liquid crystal alignment direction control electrodes arranged in the vicinity of both sides of the scan signal wiring are set as polar potentials different from each other; and

polarities of the potential of the transparent pixel electrode, and each of the potential of the two rows of the liquid crystal alignment direction control electrodes mutually separated in one pixel are reversed to a potential of the flat common electrode in the color filter substrate side every vertical scanning period.

16. A color active matrix type vertically aligned mode liquid crystal display comprising on a substrate:

a scan signal wiring;

a video signal wiring;

a thin film transistor which is formed at an intersection of the scan signal wiring and the video signal wiring;

a transparent pixel electrode, connected to the thin film transistor element, that has two or more of circular or polygonal holes and two or more long and slender slits currently formed therein;

an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of slits of the transparent pixel electrode currently formed via an insulator film;

a color filter substrate facing the active matrix substrate; and

an anisotropic liquid crystal layer having negative dielectric constant sandwiched by the active matrix substrate and the color filter substrate,

wherein adjacent transparent pixel electrodes in a direction of the scan signal wiring are connected to a thin

film transistor component controlled by mutually different scan signal wirings,

further wherein, in order to impress a voltage to liquid crystal molecules that are vertically aligned between the active matrix substrate and the color filter substrate and to make the liquid crystal molecules tilt in many directions, two kinds of following electrode structures are formed in one pixel of the active matrix substrate:

(i) an electrode structure in which a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrodes facing thereto in the active matrix substrate side, circular or polygonal holes (no transparent electrodes in a portion of a hole) are formed;

(ii) an electrode structure in which a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrodes facing thereto in the active matrix substrate side, patterns having a shape of a long and slender slit are formed, and liquid crystal alignment direction control electrodes having almost the same shape as a shape of the slit, and a larger dimension than a dimension of the slit are formed in a lower layer of the slit via the insulated film.

17. A method for driving a color active matrix type vertically aligned mode liquid crystal display having a transparent pixel electrode in which two or more long and slender slits are formed where adjacent transparent pixel electrodes in a direction of scan signal wiring are connected to a thin film transistor component controlled by mutually different scan signal wirings, an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of the slits of the transparent pixel electrode currently formed via an insulator film, a color filter substrate facing the active matrix substrate, and an electrode structure for each pixel

of the active matrix substrate in which (i) a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrodes facing thereto in the active matrix substrate side, circular or polygonal holes (no transparent electrodes in a portion of a hole) are formed, and (ii) a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrodes facing thereto in the active matrix substrate side, patterns having a shape of a long and slender slit are formed, and liquid crystal alignment direction control electrodes having almost the same shape as a shape of the slit, and a larger dimension than a dimension of the slit are formed in a lower layer of the slit via the insulated film; said driving method comprising the following steps of:

setting a potential of the liquid crystal alignment direction control electrode currently placed in a lower layer of the slit of the transparent pixel electrode lower than a potential of the transparent pixel electrode when a potential of the transparent pixel electrode separated for every pixel of the active matrix substrate side is lower than a potential of the facing flat common electrode on the color filter substrate side;

setting a potential of the liquid crystal alignment direction control electrode placed in a lower layer of the slit of the transparent pixel electrode higher than a potential of the transparent pixel electrode when a potential of the transparent pixel electrode is higher than a potential of the facing flat common electrode of the color filter substrate side; and

reversing polarities of the potential of the transparent pixel electrode, and the potential of the liquid crystal alignment direction control electrode to a potential of the flat common electrode on the color filter substrate side every vertical scanning period.

18. The color active matrix type vertically aligned mode liquid crystal display according to Claim 16,

wherein when a potential of the transparent pixel electrode separated for every pixel of the active matrix substrate side is lower than a potential of the facing flat common electrode on the color filter substrate side, a potential of the liquid crystal alignment direction control electrode currently placed in a lower layer of the slit of the transparent pixel electrode is set lower than a potential of the transparent pixel electrode;

when a potential of the transparent pixel electrode is higher than a potential of the facing flat common electrode of the color filter substrate side, a potential of the liquid crystal alignment direction control electrode placed in a lower layer of the slit of the transparent pixel electrode is set higher than a potential of the transparent pixel electrode; and

polarities of the potential of the transparent pixel electrode, and the potential of the liquid crystal alignment direction control electrode are reversed to a potential of the flat common electrode in the color filter substrate side every vertical scanning period.

19. The color active matrix type vertically aligned mode liquid crystal display according to Claim 1,

wherein a slit formed in the transparent pixel electrode on the active matrix substrate side and extending long and slender, and a slit forming a group with the liquid crystal alignment direction control electrode are arranged alternately, maintaining an almost parallel relationship in a direction making about ±45 degrees to a direction of a scan signal wiring.

20. The color active matrix type vertically aligned mode liquid crystal display according to Claim 1,

wherein there is adopted a structure that slits formed in the transparent pixel electrode in the active matrix

substrate side and extending long and slender are arranged in a direction making ±45 degrees to a direction of a scan signal wiring;

slits forming a group with the liquid crystal alignment direction control electrode are arranged in a parallel direction and in a perpendicular direction to a direction of the scan signal wiring; and

the liquid crystal alignment direction control electrode encloses a periphery of the transparent pixel electrode while overlapping with the transparent pixel electrode via the insulated film.

21. The color active matrix type vertically aligned mode liquid crystal display according to Claim 1,

wherein there is adopted a structure that a slit formed in a transparent pixel electrode in an active matrix substrate side and extending long and slender is arranged in a parallel direction and in a perpendicular direction to a scan signal wiring direction;

a slit forming a group with the liquid crystal alignment direction control electrode is arranged in parallel to the scan signal wiring direction; and

the liquid crystal alignment direction control electrode encloses a periphery of the transparent pixel electrode while overlapping with the transparent pixel electrode via the insulated film.

22. The color active matrix type vertically aligned mode liquid crystal display according to Claim 1,

wherein there is adopted a structure that slits formed in the transparent pixel electrode in the active matrix substrate side and extending long and slender are arranged in a parallel direction and in a perpendicular direction to a scan signal wiring direction; and

slits forming a group with a liquid crystal alignment direction control electrode are arranged in a direction making ±45 degrees to a direction of a scan signal wiring.

23. The color active matrix type vertically aligned mode liquid crystal display according to Claim 10,

wherein there is adopted a structure that slits forming a group with the liquid crystal alignment direction control electrode are arranged in a parallel direction and in a perpendicular direction to a direction of the scan signal wiring so as to enclose two or more of circular or polygonal holes currently formed in the transparent pixel electrode in the active matrix substrate side; and

the liquid crystal alignment direction control electrode encloses a periphery of the transparent pixel electrode while overlapping with the transparent pixel electrode via the insulated film.

24. The color active matrix type vertically aligned mode liquid crystal display according to Claim 1,

wherein the liquid crystal alignment direction control electrode formed in a lower layer of slits of the transparent pixel electrode via the insulated film is simultaneously formed in the same layer at the time of formation of the scan signal wiring.

25. The color active matrix type vertically aligned mode liquid crystal display according to Claim 1,

wherein additional capacitance is formed with the liquid crystal alignment direction control electrode formed in a lower layer of slits of the transparent pixel electrode via the insulated film, and the transparent pixel electrode.

26. The color active matrix type vertically aligned mode liquid crystal display according to Claim 4,

wherein both of contact buttons of the scan signal wiring and the liquid crystal alignment direction control electrodes are arranged on either of left side or right side of a display screen part, and contact buttons of two rows of the liquid crystal alignment direction control electrode for controlling one row of pixels are arranged so that they may

be sandwiched between the contact buttons of the scan signal wiring.

27. The color active matrix type vertically aligned mode liquid crystal display according to Claim 7,

wherein both of contact buttons of the scan signal wiring and the liquid crystal alignment direction control electrodes are arranged on either of left side or right side of a display screen part, and contact buttons of one row of the liquid crystal alignment direction control electrode for controlling one row of pixels are arranged so that they may be sandwiched between the contact buttons of the scan signal wiring.

28. The color active matrix type vertically aligned mode liquid crystal display according to Claim 1,

wherein contact buttons of the scan signal wiring are arranged on either of left side or right side of a display screen part, and contact buttons of the liquid crystal alignment direction control electrode are arranged on another side different from a side of the contact buttons of the scan signal wiring.

29. The color active matrix type vertically aligned mode liquid crystal display according to Claim 4,

wherein contact buttons for both of the scan signal wiring and the liquid crystal alignment direction control electrodes are arranged on both of right and left sides of a display screen part, and contact buttons of two rows of the liquid crystal alignment direction control electrode for controlling one row of pixels are arranged so that they may be sandwiched between the contact buttons of the scan signal wiring.

30. The color active matrix type vertically aligned mode liquid crystal display according to Claim 7,

wherein contact buttons for both of the scan signal wiring and the liquid crystal alignment direction control electrodes are arranged on both of right and left sides of

a display screen part, and contact buttons of one row of the liquid crystal alignment direction control electrode for controlling one row of pixels are arranged so that they may be sandwiched between the contact buttons of the scan signal wiring.

31. The color active matrix type vertically aligned mode liquid crystal display according to Claim 1,

wherein at the time of moving image displaying, a bias voltage impressed between the liquid crystal alignment direction control electrode currently formed in a lower layer of a slit of the transparent pixel electrode and the transparent pixel electrode is set higher than a voltage at the time of still picture displaying, and thereby, a tilting speed of the anisotropic liquid crystal molecules having a negative dielectric constant are set higher.

32. A color active matrix type vertically aligned mode liquid crystal display comprising on a substrate:

a scan signal wiring;

a video signal wiring;

a thin film transistor which is formed at an intersection of the scan signal wiring and the video signal wiring;

a transparent pixel electrode connected to the thin film transistor element in which two or more long and slender slits are formed;

an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of slits of the transparent pixel electrode currently formed via an insulator film;

a color filter substrate facing the active matrix substrate; and

an anisotropic liquid crystal layer having negative dielectric constant sandwiched by the active matrix substrate and the color filter substrate,

wherein, in order to impress a voltage to liquid crystal molecules vertically aligned between the active matrix substrate and the color filter substrate, and to make the liquid crystal molecules tilt in different two directions or four directions, two kinds of following electrode structures and structure arrangements are formed in one pixel of the active matrix substrate:

(i) an electrode structure and a structure arrangement in which a transparent flat common electrode is used on the color filter substrate side, and for the transparent pixel electrodes facing the transparent flat common electrode on the active matrix substrate side, patterns (no transparent electrode in a slit part) having a shape of a long and slender slit are formed;

(ii) an electrode structure and a structure arrangement in which a transparent flat common electrode is used on the color filter substrate side, and for the transparent pixel electrode facing the transparent flat common electrode in the active matrix substrate side, patterns having a shape of a long and slender slit are formed, and a liquid crystal alignment direction control electrode having almost the same shape as a shape of the slits and a larger dimension than a dimension of the slits is formed in a lower layer of the slits via the insulator film;

(iii) in a pixel of n row m column, a thin film transistor element is formed in a position where a scan signal wiring of (n-1) row and a video signal wiring of (m+1) column intersect with each other, and a video signal wiring of (m+1) column and a liquid crystal alignment direction control electrode used for a pixel of n row m column are connected via the thin film transistor element; and

a thin film transistor element is formed in a position where a scan signal wiring of n row and a video signal wiring of m column intersect with each other, and a video signal wiring of m column and a transparent pixel electrode used

for a pixel of n row m column are connected via the thin film transistor element.

33. A color active matrix type vertically aligned mode liquid crystal display comprising on a substrate:

a scan signal wiring;

a video signal wiring;

a thin film transistor which is formed at an intersection of the scan signal wiring and the video signal wiring;

a transparent pixel electrode connected to the thin film transistor element in which two or more long and slender slits are formed;

an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of slits of the transparent pixel electrode currently formed via an insulator film;

a color filter substrate facing the active matrix substrate; and

an anisotropic liquid crystal layer having a negative dielectric constant sandwiched by the active matrix substrate and the color filter substrate,

wherein, in order to impress a voltage to liquid crystal molecules vertically aligned between the active matrix substrate and the color filter substrate, and to make the liquid crystal molecules tilt in different two directions or four directions, two kinds of following electrode structures and structure arrangements are formed in one pixel of the active matrix substrate:

(i) an electrode structure and a structure arrangement in which a transparent flat common electrode is used on the color filter substrate side, and for the transparent pixel electrodes facing the transparent flat common electrode on the active matrix substrate side, patterns (no transparent electrode in a slit part) having a shape of a long and slender slit are formed;

(ii) an electrode structure and a structure arrangement in which a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrode facing the transparent flat common electrode in the active matrix substrate side, patterns having a shape of a long and slender slit are formed, and a liquid crystal alignment direction control electrode having almost the same shape as a shape of the slits and a larger dimension than a dimension of the slits is formed in a lower layer of the slits via the insulator film;

(iii) in a pixel of n row m column, a thin film transistor element is formed in a scan signal wiring of (n-1) row, a common electrode of n row, and a liquid crystal alignment direction control electrode used for a pixel of n row m column are connected via the thin film transistor element, and a thin film transistor element is formed in a position where a scan signal wiring of n row and a video signal wiring of m column intersect with each other, and the video signal wiring of m column, and a transparent pixel electrode used for a pixel of n row m column are connected via the thin film transistor element.

34. A color active matrix type vertically aligned mode liquid crystal display comprising on a substrate:

a scan signal wiring;

a video signal wiring;

a thin film transistor which is formed at an intersection of the scan signal wiring and the video signal wiring;

a transparent pixel electrode, connected to the thin film transistor element, that has two or more of circular or polygonal holes and two or more long and slender slits currently formed therein;

an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of

slits of the transparent pixel electrode currently formed via an insulator film;

a color filter substrate facing the active matrix substrate; and

an anisotropic liquid crystal layer having negative dielectric constant sandwiched by the active matrix substrate and the color filter substrate,

wherein in order to impress a voltage to liquid crystal molecules that are vertically aligned between the active matrix substrate and the color filter substrate and to make the liquid crystal molecules tilt in many directions, two kinds of following electrode structures and structure arrangements are formed in one pixel of the active matrix substrate:

(i) an electrode structure and a structure arrangement in which a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrodes facing the transparent flat common electrode in the active matrix substrate side, circular or polygonal holes (no transparent electrodes in a portion of a hole) are formed;

(ii) an electrode structure a structure arrangement in which a transparent flat common electrode is used on the color filter substrate side, and for the transparent pixel electrode facing the transparent flat common electrode in the active matrix substrate side, patterns having a shape of a long and slender slit are formed, and a liquid crystal alignment direction control electrode having almost the same shape as a shape of the slits and a larger dimension than a dimension of the slits is formed in a lower layer of the slits via the insulator film;

(iii) in a pixel of n row m column, a thin film transistor element is formed in a position where a scan signal wiring of (n-1) row and a video signal wiring of (m+1) column intersect, and a video signal wiring of (m+1) column and a

liquid crystal alignment direction control electrode used for a pixel of n row m column are connected via the thin film transistor element; and

a thin film transistor element is formed in a position where a scan signal wiring of n row and a video signal wiring of m column intersect with each other, and the video signal wiring of m column, and a transparent pixel electrode used for the pixel of n row m column are connected via this thin film transistor element.

35. A color active matrix type vertically aligned mode liquid crystal display comprising on a substrate:

a scan signal wiring;

a video signal wiring;

a thin film transistor which is formed at an intersection of the scan signal wiring and the video signal wiring;

a transparent pixel electrode, connected to the thin film transistor element, that has two or more of circular or polygonal holes and two or more long and slender slits currently formed therein;

an active matrix substrate having a liquid crystal alignment direction control electrode in a lower layer of slits of the transparent pixel electrode currently formed via an insulator film;

a color filter substrate facing the active matrix substrate; and

an anisotropic liquid crystal layer having negative dielectric constant sandwiched by the active matrix substrate and the color filter substrate,

wherein, in order to impress a voltage to liquid crystal molecules that are vertically aligned between the active matrix substrate and the color filter substrate and to make the liquid crystal molecules tilt in many directions, two kinds of following electrode structures and

structure arrangements are formed in one pixel of the active matrix substrate:

(i) an electrode structure and a structure arrangement in which a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrodes facing the transparent flat common electrode in the active matrix substrate side, circular or polygonal holes (no transparent electrodes in a portion of a hole) are formed;

(ii) an electrode structure and a structure arrangement in which a transparent flat common electrode is used in the color filter substrate side, and for the transparent pixel electrode facing the transparent flat common electrode in the active matrix substrate side, patterns having a shape of a long and slender slit are formed, and a liquid crystal alignment direction control electrode having almost the same shape as a shape of the slits and a larger dimension than a dimension of the slits is formed in a lower layer of the slits via the insulator film;

(iii) in a pixel of n row m column, a thin film transistor element is formed on a scan signal wiring of (n-1) row, a common electrode of n row, and a liquid crystal alignment direction control electrode used for a pixel of n row m column are connected via the thin film transistor element; and a thin film transistor element is formed in a position where a scan signal wiring of n row and a video signal wiring of m column intersect with each other, and the video signal wiring of m column, and a transparent pixel electrode used for a pixel of n row m column are connected via the thin film transistor element.

36. The color active matrix type vertically aligned mode liquid crystal display according to Claim 32, the display being driven by the method,

wherein a time width of the scan signal waveform in the scan signal wiring is no less than twice of a horizontal period,

a scan signal waveform in a scan signal wiring of (n-1)th row and a scan signal waveform in a scan signal wiring of (n)th row overlap one another by no less than one time of a horizontal period, and

polarities of a video signal voltage of a video signal wiring of m column, and a video signal voltage of a video signal wiring of (m+1) column are different from each other, and the polarities being mutually exchanged every horizontal period, and the polarities being mutually reversed every vertical period.

37. The color active matrix type vertically aligned mode liquid crystal display according to Claim 32,

wherein a channel length (L_2) of a thin film transistor element that is formed in a position where a scan signal wiring of (n-1) row and a video signal wiring of column (m+1) intersect with each other, and is connected with the liquid crystal alignment direction control electrode is larger than a channel length (L_1) of a thin film transistor element that is formed in a position where a scan signal wiring of n row and a video signal wiring of m column intersect with each other, and is connected with the transparent pixel electrode ($L_1 < L_2$).

38. The color active matrix type vertically aligned mode liquid crystal display according to Claim 33,

wherein a channel length (L_2) of a thin film transistor element that is formed on a scan signal wiring of (n-1) row, and is connected with the liquid crystal alignment direction control electrode is larger than a channel length (L_1) of a thin film transistor element that is formed in a position where a scan signal wiring of n row and a video signal wiring of m column intersect with each other, and is connected with the transparent pixel electrode ($L_1 < L_2$).

39. The color active matrix type vertically aligned mode liquid crystal display according to Claim 32,

wherein a double transistor element structure or an offset channel element structure is used for a thin film transistor element connected with the liquid crystal alignment direction control electrode.

40. The color active matrix type vertically aligned mode liquid crystal display according to Claim 32,

wherein a slit formed in the transparent pixel electrode on the active matrix substrate side and extending long and slender, and a slit forming a group with the liquid crystal alignment direction control electrode are arranged alternately, maintaining a relationship almost parallel to each other in an angle direction of about ±45 degrees to an extending direction of the scan signal wiring.

41. The color active matrix type vertically aligned mode liquid crystal display according to Claim 32,

wherein there is adopted a structure that a slit formed in the transparent pixel electrode on the active matrix substrate side and extending long and slender are arranged substantially in a parallel direction and in a perpendicular direction to an extending direction of the scan signal wiring; and a slit forming a group with the liquid crystal alignment direction control electrode is arranged in a angle direction of about ±45 degrees to a direction of the scan signal wirings.

42. The color active matrix type vertically aligned mode liquid crystal display according to Claim 32,

wherein there is adopted a structure that slit formed in the transparent pixel electrode in the active matrix substrate side and extending long and slender is arranged in an angle direction of about ±45 degrees to an extending direction of the scan signal wiring; and a slit forming a group with the liquid crystal alignment direction control electrode is arranged in a parallel direction and in a

perpendicular direction to an extending direction of the scan signal wiring; and the liquid crystal alignment direction control electrode encloses a periphery of the transparent pixel electrode while overlapping with the transparent pixel electrode via the insulated film.

43. The color active matrix type vertically aligned mode liquid crystal display according to Claim 34,

wherein there is adopted a structure that a slit forming a group with the liquid crystal alignment direction control electrode is arranged in a parallel direction and in a perpendicular direction to an extending direction of the scan signal wiring so that two or more circular or polygonal holes currently formed in the transparent pixel electrode in the active matrix substrate side may be surrounded; and the liquid crystal alignment direction control electrode encloses a periphery of the transparent pixel electrode while overlapping with the transparent pixel electrode via the insulated film.

44. The color active matrix type vertically aligned mode liquid crystal display according to Claim 32,

wherein the liquid crystal alignment direction control electrode formed in a lower layer of a slit of the transparent pixel electrode via the insulated film is simultaneously formed in the same layer at the time of formation of the scan signal wiring.

45. The color active matrix type vertically aligned mode liquid crystal display according to Claim 32,

wherein the liquid crystal alignment direction control electrode formed in a lower layer of a slit of the transparent pixel electrode via the insulated film is simultaneously formed in the same layer at the time of formation of the video signal wiring.

46. The color active matrix type vertically aligned mode liquid crystal display according to Claim 32,

wherein two thin film transistor elements are required in one pixel in order to drive the one pixel and only one contact hole exists for electrically connecting a drain electrode of a thin film transistor element formed in a position where a scan signal wiring of n row and a video signal wiring of m column intersect with each other, and the transparent pixel electrode.

47. The color active matrix type vertically aligned mode liquid crystal display according to Claim 32,

wherein two thin film transistor elements are required in one pixel in order to drive the one pixel; two contact holes exist for electrically connecting a drain electrode of a thin film transistor element formed in a position where a scan signal wiring of (n-1) row and a video signal wiring of (m+1) column intersect with each other, and the liquid crystal alignment direction control electrode; and only one contact hole exists for electrically connecting a drain electrode of a thin film transistor element formed in a position where a scan signal wiring of n row and a video signal wiring of m column intersect with each other, and the transparent pixel electrode.

48. The color active matrix type vertically aligned mode liquid crystal display according to Claim 32,

wherein two thin film transistor elements are required in one pixel in order to drive the one pixel; and one thin film transistor element is connected to the transparent pixel electrode, another remaining thin film transistor element is connected to the liquid crystal alignment direction control electrode, and the transparent pixel electrode and the liquid crystal alignment direction control electrode are overlapped via the insulated film to form a capacitance.

49. The color active matrix type vertically aligned mode liquid crystal display according to Claim 32,

wherein an intermediate electrode of a thin film transistor element connected with the liquid crystal alignment direction control electrode and having a double transistor structure and the transparent pixel electrode overlap via the insulated film to form a capacitance.

50. The color active matrix type vertically aligned mode liquid crystal display according to Claim 32,

wherein a transparent pixel electrode of n row and m column and a scan signal wiring of (n-1)th row overlap one another via the insulated film to form a storage capacitor.

51. The color active matrix type vertically aligned mode liquid crystal display according to Claim 33,

wherein a transparent pixel electrode of n row and m column and a common electrode of n row overlap one another via the insulated film to form a storage capacitor.

52. A color active matrix type vertically aligned mode liquid crystal display according to Claim 32,

wherein the thin film transistor element, the video signal wiring, and the liquid crystal alignment direction control electrode are prepared in the same layer simultaneously, using a half-tone exposure technique.